

DII.3006.NT40.Kernel.VDD-1

**Defense Information Infrastructure (DII)
Common Operating Environment (COE)**

Version 3.0.0.6

**Version Description Document for the Kernel
(Windows NT 4.0)**

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NOTE: Courier font is used to indicate entries to be typed at the keyboard, Windows NT commands, file and directory names, and screen text. For example:

The file is located in the `DII_DEV` directory.

1. System Overview

The Defense Information Infrastructure (DII) Common Operating Environment (COE) will normally make available a large number of segments, not all of which are required for every application. The COE *Kernel* is the minimum set of software required on every workstation regardless of how the workstation will be used. The COE Kernel for the Windows NT environment includes the following component:

- Ⓒ **COEInstaller runtime tool Version 1.0.0.11**—Used to support the segment installation process. The COEInstaller tool displays a list of segments that may be installed from floppy diskettes. The COEInstaller tool normally is executed by an operator who selects it from the DII Administrator program manager group.

The *DII COE Integration and Runtime Specification* and the *DII COE System Administrator's Guide (Windows NT 4.0)* provide a description of the COEInstaller tool and its functionality.

This version of the DII COE Kernel is designed to run on the Windows NT Operating System Version 4.0.

2. Referenced Documents

The following documents are referenced in this Version Description Document:

- Ⓒ *Defense Information Infrastructure (DII) Common Operating Environment (COE) Integration and Runtime Specification* Version 2.0, DII COE I&RTS:Rev 2.0, Inter-National Research Institute, October 23, 1995
- Ⓒ *Defense Information Infrastructure (DII) Common Operating Environment (COE) System Administrator's Guide* Version 3.0.0.6 (*Windows NT 4.0*), DII.3006.NT40.AG-1, Inter-National Research Institute, February 5, 1997
- Ⓒ *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.0.0.6 Kernel Installation Guide (Windows NT 4.0)*, DII.3006.NT40.IG-1, Inter-National Research Institute, February 5, 1997.

3. Version Description

3.1 Inventory of Materials Released

- C Magnetic media: Two copies of two 3.5" floppy diskettes, each containing the DII COE Kernel packaged in an InstallShield installer for Windows NT 4.0.
- C Soft-copy Documentation: One 3.5" floppy diskette (WordPerfect 6.0 for Windows format) containing the *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.0.0.6 Version Description Document for the Kernel (Windows NT 4.0)*, Document Control No. DII.3006.NT40.Kernel.VDD-1, February 5, 1997.
- C Hard-copy Documentation: Two hard copies of the aforementioned Version Description Document.

3.2 Software Changes

The directory structure for installed segments was modified to comply with the *DII COE Integration and Runtime Specification*. In addition, the registry structure for segments was changed. Reference the following table for a list of software changes for the DII COE Version 3.0.0.6 Kernel (Windows NT 4.0).

DII COE Version 3.0.0.6 Kernel (Windows NT 4.0) Software Changes	
Total Software Changes: [6]	
INRI Number:	RTO00000716
Agency Number:	None.
Short Description:	Use of "hot keys" is inconsistent in the Installer window.
Long Description:	Use of "hot keys" is inconsistent in the Installer window. For example, the <Alt> N "hot key" is used to display a segment's "ReleaseNotes" file. If the "hot key" sequence is performed once the appropriate "ReleaseNotes" file appears, all subsequent "hot-keys" do not operate.

DII COE Version 3.0.0.6 Kernel (Windows NT 4.0) Software Changes	
INRI Number:	RTO00000819
Agency Number:	None.
Short Description: The reserved disk space allocation does not return to the default 80 percent.	
Long Description: The reserved disk space for a particular installation can be modified from the default 80 percent in the Installer window. The next time the Installer window is opened, however, the reserved disk space is at the same override value as before instead of returning to the default 80 percent. This is not consistent with the UNIX tool.	
INRI Number:	RTO00001358
Agency Number:	None.
Short Description: The directory structure on NT does not match the directory structure specified in the I&RTS.	
Long Description: Segments installed on NT are being installed under /h/Segments rather than the appropriate directories (e.g., /h/AcctGrps, /h/COTS, /h/COE). Segments should be installed in a directory structure that matches the structure specified in the I&RTS.	
INRI Number:	RTO00001359
Agency Number:	None.
Short Description: Network drives should not be allowed as installation drive targets.	
Long Description: The I&RTS states that the installation software should not consider network disk drives as target disks during installation (page G-11); however, the Installer allows network disk drives as targets. The software should be modified so it does not allow network drives as installation targets.	
INRI Number:	RTO00001360
Agency Number:	None.
Short Description: The Installer should default to the C: drive as the default target installation drive.	
Long Description: The I&RTS states that the installation software will first attempt to install software on disk drive C: (page G-11). The Installer should be modified to default to the C: drive as a the target software installation drive.	

DII COE Version 3.0.0.6 Kernel (Windows NT 4.0) Software Changes	
INRI Number:	RTO00001361
Agency Number:	None.
Short Description:	Several registry keys require modifications.
Long Description:	The registry key "Home" should be changed to "SegPath" to match the key specified in the I&RTS (page G-25). The key "DII_COE" should be changed to "COE" to match the key specified in the I&RTS. The key "Segments" should be removed because it adds an unneeded layer to the registry structure.

4. Installation Instructions

Reference the *DII COE Kernel Installation Guide (Windows NT 4.0)* for instructions on installing the DII COE Kernel.

5. Known Problems and Errors

Reference the following table for a list of known problems and errors with the DII COE Version 3.0.0.6 Kernel (Windows NT 4.0).

DII COE Version 3.0.0.6 Kernel (Windows NT 4.0) Known Problems and Errors	
Total Open Known Problems and Errors: [13]	
INRI Number:	RTO00001354
Agency Number:	None.
Short Description:	Segment installation size discrepancy when installing aggregate segments on NT.
Long Description:	When installing aggregate segments on NT, the segment reported a size of -1 KB instead of the original 6-7 digit number it reported when reading the TOC initially.
INRI Number:	RTO00001355
Agency Number:	None.
Short Description:	Problem deinstalling a segment that appeared in the second entry of System Administration.
Long Description:	After deinstalling a segment that appeared in the second entry of System Administration, the segment did not disappear from the menu. For example, when loading "ALPHA", it immediately became an option off of Start>Programs>System Administration (bottom section). After deinstalling "ALPHA", it was still listed as an option.

DII COE Version 3.0.0.6 Kernel (Windows NT 4.0) Known Problems and Errors	
INRI Number:	RTO00001356
Agency Number:	None.
Short Description: Problem deinstalling a parent and a patch segment.	
Long Description: When deinstalling a parent and a patch segment, the Installer does not process the segments in the correct order when both segments are selected. The Installer removed the parent segment first, thus removing the patches directory so that an error occurred during the deinstallation of the patch. Upon deinstallation of the parent, the Installer continued to try to remove the patch segment (resulting in an error). The Installer could not deinstall the patch segment because it could no longer locate the affected segment. Patch segments can be properly deinstalled by deinstalling the segments individually. First, the patch segment should be deinstalled, followed by deinstallation of the parent segment.	
INRI Number:	RTO00001357
Agency Number:	None.
Short Description: Installer fails to read the TOC for a patch segment when the segment is not on the hard drive.	
Long Description: The COEInstaller terminates unexpectedly with the following message when reading the TOC for a patch segment if the affected segment is not already installed, even if the affected segment is also on the diskette with the patch: "COEInstaller.exe Application Error. The exception unknown software exception (0xc00000fd) occurred in the application at location 0x77f645b8. Click on OK to terminate the application."	
INRI Number:	RTO00001364
Agency Number:	None.
Short Description: The NT Installer should install required segments before installing selected segments.	
Long Description: The NT Installer should read the Requires descriptor for each segment selected for installation and install required segments first. Instead, an error message appears stating that the required segments are not on disk, and the Installer does not search the tape. On other platforms, the Installer searches the disk and then the tape for the required segments and installs them before installing the selected segment. The NT Installer should be modified to be consistent with the Installers running on other platforms.	

DII COE Version 3.0.0.6 Kernel (Windows NT 4.0) Known Problems and Errors

INRI Number: RTO00001365

Agency Number: None.

Short Description:

The NT Installer should warn the user when a segment selected for installation is already on disk.

Long Description:

If a segment selected for installation is already on disk, the NT Installer does not attempt to reinstall it, nor does it warn the operator that the segment is already on disk. Instead, the Installer halts the installation process, provides a failure message, and defers to the Installation Log. The log presents a message stating that the selected segment is already installed. The Installer on other platforms warns the user that the selected segment is currently on disk and allows the user to reinstall over the segment. The NT Installer should be modified so it is consistent with the Installers running on other platforms.

INRI Number: RTO00001366

Agency Number: None.

Short Description:

NT COEInstaller should automatically deinstall all patch segments when affected parent segment is selected for deinstallation.

Long Description:

The NT COEInstaller should automatically deinstall all patch segments when affected parent segment is selected for deinstallation. The NT COEInstaller allows an operator to deinstall the parent segment, leaving the patch segments on disk. Patch segments should not remain on disk without the segment that they are affecting. On other platforms, COEInstaller automatically deinstalls all patches currently on disk when the affected parent is selected for deinstallation. The NT Installer should be modified so it is consistent with the Installers running on other platforms.

INRI Number: RTO00001367

Agency Number: None.

Short Description:

No confirmation window appears when exiting the NT Installer.

Long Description:

Currently, the operator must click on the EXIT button to exit the NT Installer. The operator can, however, unintentionally exit the COEInstaller by pressing the [RETURN] key if the EXIT button is active. The operator must acknowledge preinstall/postinstall/DEINSTALL script messages by pressing the [RETURN] key. Pressing the [RETURN] key one too many times can exit the user from the window since no confirmation window appears to warn the operator that the window will close. A confirmation window should be added to ensure that the exit from the Installer window is intentional.

DII COE Version 3.0.0.6 Kernel (Windows NT 4.0) Known Problems and Errors	
INRI Number:	RTO00001368
Agency Number:	None.
Short Description: Entries in the NT Installation Log should be modified to provide clear feedback regarding successful installation.	
Long Description: Currently, the NT Installation Log displays a message representing a successful installation as “Removed cpp from...”. This message may confuse the operator since it does not specifically state that the selected segment installed correctly. COEInstaller Installation Logs on other platforms are more specific and thus more user friendly. The NT Installer should be modified to be consistent with the Installers running on other platforms.	
INRI Number:	RTO00001369
Agency Number:	None.
Short Description: The NT Installation Log needs to clearly delineate which messages refer to which installation/deinstallation actions.	
Long Description: The Installation Log reflects all COEInstaller actions during the current session (i.e., it does not simply record the last installation or deinstallation). All of the older data remains in the log and all new data is simply appended to the file. The operator may find this confusing when trying to distinguish new data from previous data. The NT Installation Log should clearly delineate which messages refer to which installation/deinstallation actions.	
INRI Number:	RTO00001370
Agency Number:	None.
Short Description: The UNIX Installation Log needs to be modified to be consistent with the NT implementation.	
Long Description: The UNIX Installation Log needs to be modified to be consistent with the NT implementation. The log should reflect all COEInstaller actions during the current session (i.e., it should not simply record the last installation or deinstallation). New data should be appended to the file as it is currently on NT.	
INRI Number:	RTO00001371
Agency Number:	None.
Short Description: NT MakeInstall does not overwrite previous MakeInstall entries when writing to a mapped drive.	
Long Description: The NT MakeInstall does not delete previous entries when writing to a mapped drive--the TOC refers only to the latest MakeInstall action on that drive, but the earlier “MakeInstalled” segment is not deleted from the drive. Note: This problem does not happen when writing to diskette.	

DII COE Version 3.0.0.6 Kernel (Windows NT 4.0) Known Problems and Errors

<p>INRI Number: RTO00001372</p>
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<p>Agency Number: None.</p>

<p>Short Description:</p>

<p>NT Kernel installation with multiple diskettes does not indicate incomplete installation for failure.</p>
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<p>Long Description:</p>

<p>During NT kernel installation requiring installation of multiple diskettes, no warning is returned if the user installs the wrong diskette. DII COE 3.0.0.6 requires installation of two diskettes. If the user inserts, for example, a developer tools diskette when prompted to insert the second diskette, no warning appears and the installation continues as if successful. The window indicating that the kernel has been installed immediately appears, and the user has no way of knowing immediately that the installation was not complete.</p>

6. Release Notes

1. This release of the DII COE Kernel performs a destructive installation. If a previous version of the DII COE Kernel is installed on the machine, the kernel installation process will remove the registry entries for previously installed segments. Segments that were part of the previous kernel installation (i.e., COE, SysAdm, and WINNT) will be overwritten. Reference the *DII COE Version 3.0.0.6 Kernel Installation Guide (Windows NT 4.0)* for detailed instructions on installing the DII COE Kernel.
2. The DII COE Kernel must be installed on the NTFS (NT File System). For this reason, the DOS file name limitations of an eight-character file name with a three-character extension (e.g., `FILENAME.EXT`) do not apply to COE files.
3. It is recommended that you close all other applications before running the COEInstaller. Doing so will prevent possible conflicts between running applications and the applications being installed.
4. Account groups are provided as Programs Menu icon groups. For this reason, when an account group is installed, no new login or profile is created.
5. The COEInstaller now forces patches to be deinstalled in the correct order. Patch segments of a higher number must be deinstalled before patch segments of a lower number. However, if multiple patches are selected for removal at the same time, the COEInstaller may generate an error that states that the higher numbered patches must be deinstalled first. If this occurs, deinstall the patches one at a time in the correct order.
6. Some executables may cause resource contention problems when used during PostInstall processing. These resource contention problems occur when the PostInstall executable tries to use a resource that is locked by the COEInstaller. When this occurs, the PostInstall executable appears to suspend the installation. The deadlock can be resolved by closing the `cmd.exe` window that launched the PostInstall executable, which will allow the COEInstaller to finish processing so PostInstall can obtain the resources it needs. Note that this process may execute PostInstall out of the normal sequence of events, particularly if multiple segments are selected for installation; therefore, this process should be performed with caution.
7. This version of the COEInstaller can process media created by previous versions of the MakeInstall tool. This requires the COEInstaller to support both InstallShield-based MakeInstall media and non-InstallShield-based MakeInstall media. Because of this dual support, the user interface may appear to be different when extracting the two types of MakeInstall media. Despite these differences in appearance, the COEInstaller functionality remains the same.
8. Version 1.0.1.2 of the MakeInstall tool, which was released with DII COE Version 2.0.0.1, had a known problem with splitting some segments between disks. In

some cases, the media created by Version 1.0.1.2 of MakeInstall could not be installed by the COEInstaller released with DII COE Version 2.0.0.1. This problem was resolved in Version 1.0.1.4 of MakeInstall. Because Version 1.0.1.2 of MakeInstall media was incorrect in some cases, some media created by the Version 1.0.1.2 of MakeInstall will not be able to be installed on this release of the COEInstaller as well.

9. A Windows NT segment that contains a PreInstall, PostInstall, and DEINSTALL batch file will run in DOS mode automatically. If the properties of the DOS console window on the machine are set to Full Screen rather than Window, the screen will appear to flicker when the DII COE Installer executes the batch files. The solution to this problem is to change the properties of the DOS console window from Full Screen to Window. To change the properties of the DOS console window, click on the Start button on the Windows NT taskbar, point to Settings, and click on Control Panel. The Control Panel window appears. Double-click on the Console icon to open the Console Windows Properties window. Click on the Options tab, click on the Window toggle in the Display Options control box, and click on the OK button to apply the changes.
10. When using the COEPromptPassword API, the software does not check if the max_text_len of the password is set to less than or equal to zero. Therefore, the value will not default to a maximum length of 40 characters.
11. The COEInstaller will terminate unexpectedly while reading the table of contents when the MakeInstall media contains a patch segment and the affected segment is not already installed on the machine. In order to work around this problem, make sure the affected segment is already installed on the machine before attempting to read MakeInstall media containing a patch for the segment.